ABSTRACT OF THE DISCLOSURE

An asymmetric modem communications system achieves high speed data transfers through a telephone network that includes both digital and analog communications mediums. In general, the system includes means for concurrently communicating first and second signals, respectively, in opposite directions along the connection between the communications devices and means for modulating the first and second signals with different modulation techniques. The communications occur in full duplex manner. In a possible implementation, a digital modem is interfaced to a digital network. The digital network is connected with a coder/decoder (codec). The codec is interfaced with a two-wire analog telephone connection, sometimes referred to as a copper loop. The telephone connection is interfaced with an analog modem. Both the digital and analog modems have a transmitter and a receiver. The digital modem has a transmitter that pulse modulates digital data in the sense that it generates and transmits pulse levels and a receiver that receives and demodulates signals in accordance with the standard V.34 communications protocol (employs quadrature amplitude modulation/demodulation). The analog modem has a transmitter that transmits and modulates signals in accordance with the V.34 communications protocol and a receiver that demodulates the pulse levels into digital data. With the foregoing configuration, asymmetric data communications are realized. Specifically, the analog modem communicates to the digital modem using the V.34 communications protocol at a data rate of between 33,600 b/s and 2400 b/s, inclusive, while the digital modem communicates to the analog modem at a data rate of between 64,000 b/s and 2400 b/s, inclusive.